TetR Protein, E.coli (His-SUMO)

Cat. No.:	HY-P71520
Synonyms:	tetR; Tetracycline repressor protein class B from transposon Tn10
Species:	E.coli
Source:	E. coli
Accession:	P04483 (1M-207S)
Gene ID:	56882117
Molecular Weight:	Approximately 42 kDa

PROPERTIES

AA Sequence	M S R L D K S K V I N S A L E L L N E V G I E G L T T R K L A Q K L G V E Q P T L Y W H V K N K R A L L D A L A I E M L D R H H T H F C P L E G E S W Q D F L R N N A K S F R C A L L S H R D G A K V H L G T R P T E K Q Y E T L E N Q L A F L C Q Q G F S L E N A L Y A L S A V G H F T L G C V L E D Q E H Q V A K E E R E T P T T D S M P P L L R Q A I E L F D H Q G A E P A F L F G L E L I I C G L E K Q L K C E S G S
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in 20 mM Tris-HC1, 0.5 M NaCl, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The TetR protein operates as a repressor for the tetracycline resistance element, with its N-terminal region adopting a helix-turn-helix structure that facilitates DNA binding. Tetracycline binding to TetR induces a conformational change, diminishing the repressor's affinity for the operator sites of the tetracycline resistance gene (tetA) promoter. This dynamic interaction between TetR and tetracycline serves as a regulatory mechanism, modulating the expression of genes associated with tetracycline resistance. In the presence of tetracycline, TetR undergoes alterations in its binding properties, allowing for the derepression of the tetA promoter and enabling the expression of genes involved in resistance to tetracycline.

Caution: Product has not been fully validated for medical applications. For research use only.

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